

IN THE CLAIMS:

Please cancel claims 1-5, amend claim 6 and add claims 7 and 8 as follows:

6. (Amended) An improved speech recognition system comprising:

a speech recognizer; and

a source normalization model derived by application of an estimation maximization algorithm with explicit separation of source information and environment distortion factors in an unsupervised manner

7. A recognition system comprising:

an input signal;

a stored reference;

and a comparator for comparing said input signal with said stored reference;

said stored reference has at least two components, one representing signal source and the other representing transformations for a number of environments;

said reference is identified by source normalization training, which consists in performing the following steps of:

- (a) determining a new set of signal source representation or at least part of the representation that reduces the distance between the new reference and a training signal, given training signals and current transformations and
- (b) for each environment, determine a new transformation or at least part of it that, jointly with the signal source representation, reduces the distance between the new reference and the training signal where said environment represents either a label associated with training signal or a class of distortion sources.